6.12 HUMAN HEALTH & SAFETY HAZARDS

6.12.1 Affected Environment

The following section describes the affected environment pertaining to human health and safety hazards as a result of military actions at DMR.

Hazardous Materials and Waste Management

Any hazardous waste that accumulates during training exercises at DMR is managed at hazardous waste storage points until the DRMO picks up the waste and ships it directly off-island for proper disposal (Akasaki 2002b). Hazardous waste and materials generated and used at DMR are regulated by the same federal, state, and Army regulations as at SBMR. The regulations include implementation of the current Army Hazardous Waste SOPs and the Army Spill Contingency Plan.

Specific Health and Safety Hazards

This section addresses specific human health and safety hazards associated within DMR. These hazards consistently affect the environment and often have specific regulations that govern their use, storage, and disposal.

Ammunition

During field exercises, support units are located at Dillingham Airfield. DMR also supports night training for aviation units, although it has a very limited maneuver area. Ammunition is restricted to blanks and is prohibited on the runway. Non-aerial smoke is allowed in designated areas but is prohibited on the runway. Maneuver training is not permitted on the portion of the airfield that is leased to the State of Hawai'i unless prior state approval is obtained. Although some areas are suspected to contain UXO, live-fire activities do not take place at DMR (Garo 2002a). Additionally, there are no designated impact areas or associated surface danger zones on DMR.

DMR provides the space for infantry and associated support units to maneuver. As further discussed in Chapter 2, this maneuver is conducted in a dry- or blank-fire scenario; that is, bullets are not fired. Blanks are used in rifles and machine guns, along with MILES equipment (Garo 2002a).

Installation Restoration Program

No IRP sites are under investigation on DMR.

Lead

The properties of and regulations for lead are described in detail in Section 3.12 of this document. Lead survey information for the DMR is maintained on the DPW lead and asbestos database.

Asbestos

The properties of and regulations for asbestos are described in detail in Section 3.12 of this document. Asbestos survey information for DMR is maintained on the DPW lead and asbestos database. The DPW has surveyed for ACM at 13 locations on DMR. Nine of these

surveys found the presence of friable ACM in buildings, all of which were set for demolition (USARHAW 2002d).

Polychlorinated Biphenyls

The former DMR transformer site consists of two transformer pads at an abandoned generator building on the former Nike missile launch facility. The concrete block building housed the emergency power generators and two fenced enclosures for the power distribution transformers. The transformers used at this site were of the type that typically contained PCB in cooling oil.

As part of a supplemental assessment in 1997, soil samples for PCBs were taken from around the two transformer pads on the north and east sides of the generator building. Concentrations exceeding the EPA Region IX preliminary remedial goals for future residential use scenarios were detected in samples from three of the five locations around the north transformer pad. No PCBs were detected around the perimeter of the east transformer pad.

Under current site uses, the former transformer site does not appear to pose a significant threat to human health and the environment. However, changes in site uses could create new, more immediate targets and associated risks if the surface soil contained hazardous material or waste contamination.

Electromagnetic Fields

Standard Army communications equipment is present at DMR and is operated by qualified personnel per technical publications. The public has access to Dillingham Airfield, which has sources of EMF typical to airfields.

Petroleum, Oils, and Lubricants

Only one UST remains in use on DMR and is maintained by the Department of Transportation. All other USTs either were removed from the ground or were abandoned in place in compliance with EPA regulations.

Appendix K-4 lists all current and decommissioned USTs and LUSTs on DMR. Additionally, this table provides location, responsible party, construction, and content information of all USTs and inspection and remediation status information for all LUSTs. This information is maintained by DPW personnel. All LUST sites on DMR have been remediated and have been issued a clean closure status, with the exception of tanks 7 and 8, which have not been cleaned and may contain residual fuel (Bourke 2002c).

All industrial fueling is conducted from the fueling station on SBMR. Fuels, oils, or other hazardous materials needed for training exercises are brought with the unit to the military reservation and staged in a temporary storage point. Unused materials either are brought back with the unit or are properly stored for pickup and disposal by DRMO-HI.

There are no known ASTs or OWSs on DMR.

Pesticides/herbicides

The Natural Resources Department, a division of the DPW, is the only pesticide/herbicide user on DMR, though no pesticides/herbicides are stored anywhere on DMR. Pest management for DMR is covered under the USAG-HI Installation Pest Management Plan (Yamamoto 2002).

Wildfires

There is a high risk of fire during the summer in the relatively dry Mokulēʻia region (USARHAW and 25th ID[L] 2001a, 134). Cigarettes, vehicles, and bivouac activities are the major sources of fire risk from military training. There are records for only two fires at DMR since 1996 (USARHAW and 25th ID[L] 2003, 7-4), both of which occurred in training area P-1 (east and southeast of the airstrip). They burned a total of 6 acres (2.4 hectares) and were both caused by pyrotechnics. A lack of data precludes analysis.

Fire suppression is not a high priority because of the few rare and endangered species on DMR relative to other Oʻahu subinstallations (USARHAW and 25th ID[L] 2001a, 134). Also, no live-fire training takes place, and the terrain is not conducive to high erosion rates if vegetation is absent. There are no RAWS on DMR to aid in determining weather conditions and the threat of wildfires. Through mutual aid agreements, the City and County of Honolulu Fire Department would assist the Army with initial wildfire suppression.

Five wildfire areas have been designated, based on the location of existing roads (USARHAW and 25th ID[L] 2003, 7-6 through 7-8). Each area was assigned an ignition potential, fuels hazard, and habitat value, based on the best currently available information. As a result, the airstrip and cantonment have no prevention priority. The area outside the firebreak road has a moderate wildfire prevention priority. Areas P-2 and P-3 (west and southwest of the airstrip and south of area P-1) have a moderately high prevention priority. Area P-1 has a high prevention priority.

Figure 6-20 shows the location of proposed fire management facilities. Fire protection in the fire management area includes firebreaks and fuels modification (USARHAW and 25th ID[L] 2003, 7-9). According to the IWFMP, there are no firebreaks at DMR, though there are a number of roads that would serve as firebreaks during fire suppression, and two firebreaks are planned for the near future. The first to be constructed will be completed in 2005 and will follow existing roads, though some roads will have to be improved considerably. The firebreak will start on the eastern side of DMR, will continue across the southernmost taxiway west for approximately a third of a mile (0.5 kilometer), and then will turn north and continue to the Dillingham airstrip. The second firebreak will be constructed in 2006 and will separate most of DMR from the hills to the south. This break will start in the same location on the eastern side of the installation but will first run south along the eastern installation border. It will turn to the west at the base of the mountains and will follow contours until it meets a powerline corridor. It will follow this corridor to the western boundary, where it will turn north until it meets the Dillingham airstrip. Training would be allowed outside of the firebreaks but would be limited to no ignition sources of any kind.

Figure 6-20
Fire Management Facilities at Dillingham Military Reservation

Pyrotechnics, blanks, smoking, and cooking/warming fires would not be allowed anywhere outside of the second firebreak at any time. Until the second firebreak is completed, this restriction would apply to the first firebreak. Until the first firebreak is completed, this restriction would apply to any area outside of P-1 and the Dillingham airstrip.

According to the IWFMP, fuels contained by the finished firebreaks at DMR may be considered for prescribed burning (USARHAW and 25th ID[L] 2003, 7-9). This would depend on financial and resource availability and the discretion of the Wildland Fire Program Manager. Any prescribed burning would follow all guidelines in place and would require proper environmental documentation and consultation with the USFWS. No prescribed burning would take place outside of completed firebreaks.

There is no RAWS at DMR. Schofield Barracks Range Control is responsible for retrieving weather data (USARHAW and 25th ID[L] 2003, DMR-6). The burn index, as determined by the fire danger rating system, would be used to rank fire danger based on known ignition sources. The fire danger rating system uses green and red to characterize fire conditions at DMR.

Dillingham Trail would be approximately 15 miles (24.1 kilometers) long and would provide military vehicle access between DMR and SBMR. The proposed trail route is flanked by vegetation capable of being involved in a wildfire.

According to the IWFMP, fuels along Dillingham Trail will be kept at less than 20 percent crown cover, as visually estimated (USARHAW and 25th ID[L] 2003, 7-9). Because there is little vegetation along the trail due to extensive agriculture, maintenance of this corridor should be minimal. The trail will be monitored once each spring to determine the need for fuels management. Any area with fine fuels or shrub cover greater than 20 percent crown cover would be noted and managed. Locations that are overgrown will be managed either through the application of herbicide or by cutting the grass or shrubs until they are in compliance.

6.12.2 Environmental Consequences

Summary of Impacts

This section is a discussion of the potential impacts of implementing the Proposed Action and alternatives at DMR. Both current activities that occur at DMR and proposed projects and actions associated with the Proposed Action are discussed in detail in Chapter 2. There is only one significant impact associated with human health and safety hazards at DMR under the Proposed Action or the RLA Alternative. Although DMR is a strictly nonlive-fire training installation, blank ammunition and the transportation of combustible materials, such as fuel and ordnance, could create a significant impact. This impact could be reduced to less than significant through mitigation.

All other human health and safety hazard issues were identified as being either less than significant or having no impact at all. Impacts and methodology and significance thresholds

are discussed in Chapter 4, Section 4.12.1. Table 6-26 summarizes the potential human health and safety hazards for DMR that have been identified in this analysis.

Table 6-26
Summary of Potential Human Health & Safety Hazard Impacts for DMR

Impact Issues	Proposed Action	Reduced Land Acquisition	No Action
Hazardous materials management	⊙	⊙	○
Hazardous waste management	⊙	⊙	○
Ammunition	○	○	○
Unexploded ordnance	○	○	○
General training	⊙	⊙	○
Installation restoration program sites	○	○	○
Lead	○	○	○
Asbestos	○	○	○
Polychlorinated biphenyls	○	○	○
Electromagnetic fields	⊙	⊙	⊙
Petroleum, oils and lubricants	⊙	⊙	○
Pesticides/herbicides	○	○	○
Biomedical waste	○	○	○
Radon	○	○	○
Wildfires	⊘	⊘	⊙

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

⊗ = Significant
⊘ = Significant but mitigable to less than significant
⊙ = Less than significant
○ = No impact
\+ = Beneficial impact
N/A = Not applicable

Proposed Action (Preferred Alternative)

Significant Impacts Mitigable to Less than Significant

Impact 1: Wildfires. Following the construction/upgrade of Dillingham Trail, units would transport materials and equipment via military vehicles. Transportation of personnel and use of flammable or combustible materials such as fuel or ordnance (i.e., weaponry or equipment) could increase the potential for starting a wildfire, especially in areas not previously used frequently. However, the IWFMP does not comprehensively address fire management actions for Dillingham Trail. The use of the trail by the Army would increase potential sources of wildfire ignition from Army training in areas that do not have established fire management actions, such as fire prevention and fire suppression. Unlike

training activities conducted at DMR, the trail would not always be near an installation where access to Army fire suppression resources would be readily available. A wildfire could damage animal and plant communities, damage cultural resources, and contribute to soil erosion by removing vegetation. The mitigation measures below will reduce the impact to less than significant.

Regulatory and Administrative Mitigation 1. . The IWFMP for Pōhakoloa and O'ahu Training Areas was updated in October 2003. The Army will fully implement this plan for all existing and new training areas to reduce the impacts associated with wildland fires. Public and firefighter safety is the first priority in every fire management activity. The plan considers the potential need for firebreaks and/or fuel breaks at each installation, along with other safety concerns. The plan is available upon request.

Less than Significant Impacts

Hazardous materials management. The Proposed Action would not significantly increase hazardous materials usage at DMR. Short-term impacts would be associated with roadway construction activities. Construction-related activities would require the use of hazardous materials in slight excess of existing quantities. However, contract specifications control the use of hazardous materials and require compliance with federal, state, and local requirements and with installation policy on hazardous materials. The US Army follows strict SOPs for storing and using hazardous materials. Therefore, no new procedures would need to be implemented to store or use the construction-related hazardous materials. Excess quantities of unused hazardous materials would be removed at the completion of construction.

Although the roadway proposed to be constructed between SBMR and DMR would be primarily composed of gravel, road grades steeper than 10 percent would be paved with asphalt or concrete. These materials would also be used in the construction of supporting provisions such as guardrails and signage. MSDS information on asphalt and concrete are summarized in Chapter 4, Section 4.12. According to the MSDS filed under the OSHA 29 CFR 1910.1200, there would be no significant impact from hazardous materials, and no mitigation would be necessary.

Hazardous waste management. Activities related to the Proposed Action would not significantly affect hazardous waste management. Roadway construction activities may result in temporary generation of small amounts of hazardous waste. The US Army follows strict regulations and standard operating procedures for the temporary storage and disposal of hazardous waste. The Army would be required to manage and dispose of hazardous waste generated by operations through DRMO in accordance with existing regulations and protocols regarding storage, use, and disposal. Hazardous waste associated with construction activities would cease to be generated at the completion of construction. Operational activities associated with the Proposed Action would not affect hazardous waste management. Therefore, there would be no significant impacts, and no mitigation would be required.

General training. General training activities under the Proposed Action would not likely result in any significant impacts. These training activities may expose additional areas to potential

military training equipment leaks, spills, or drips to the environment, a less than significant, long-term adverse impact. USARHAW would, during any on-site operational activities within a specific project area, implement the SOP measures discussed in Chapter 5, Section 5.12 to minimize the potential for spills or other harm to the environment. Therefore, there would be no significant impact, and no mitigation would be necessary.

Electromagnetic fields. FTI sites could potentially introduce EMF to DMR. Only one of the FTI sites would be outside the boundary of the installation. It would be on top of a ridgeline and outside the northern boundary of MMR, which is south of DMR.

The public would continue to have access to Dillingham Airfield, however, as discussed in Chapter 5, Section 5.12.2, access to FTI sites would be controlled in order to prevent exposure to EMF. Proper signage and fencing would be incorporated into the construction of the FTI facility. There would be no significant impact on the public from EMF exposure. No mitigation would be necessary.

Petroleum, oils and lubricants (POLs). Although Dillingham Trail would be primarily composed of gravel, road grades steeper than 10 percent would be paved with petroleum asphalt or concrete. These materials would also be used in the construction supporting provisions such as guardrails and signage.

Although OSHA does not categorize petroleum asphalt as carcinogenic, serious health problems can result from extended or improper exposure. Skin contact and breathing of mists, fumes, or vapors would be avoided by the construction team. Construction and disposal activities would be conducted in accordance with federal, state, and local regulations.

UAV and Strykers would be used at DMR under the Proposed Action. Maintenance and handling of the vehicles would take place on SBMR under existing SOPs. Since the use of these vehicles at DMR provides the potential for spills or leaks, DPW maintains a spill contingency plan and an SOP plan. These plans outline proper operating and emergency response procedures and responsibilities. No storage tanks are located within the project areas and no new storage tanks would be installed as a result of the Proposed Action. Although Strykers would be used on DMR under the Proposed Action, they would continue to be maintained at SBMR and maintenance impacts are discussed in Chapter 5, Section 5.12.2. The Proposed Action would not pose any significant impacts from POLs, and no mitigation would be required.

No Impacts

Ammunition. Ammunition management, handling, and use at DMR would not be affected by activities associated with the Proposed Action. DMR would maintain nonlive-fire training. There would be no ammunition impact on DMR, and no mitigation would be necessary.

Unexploded ordnance (UXO). No new ranges would be constructed and no construction would take place on former range areas. Therefore, there would be no impacts, and no mitigation would be required.

Installation restoration program sites. No IRP sites are under investigation at DMR. Therefore, there would be no impacts, and no mitigation would be required.

Lead. As no buildings or structures would be built or demolished on DMR in conjunction with the Proposed Action, construction would not generate impacts from lead. DMR would remain a nonlive-fire training area under the Proposed Action, so lead-containing ordnance would not be introduced. Therefore, there would be no impacts, and no mitigation would be required.

Asbestos. As no buildings or structures would be built or demolished in conjunction with the Proposed Action at DMR, there would be no impacts from asbestos, and no mitigation would be required.

Polychlorinated biphenyls. Roadway construction activities associated with the Proposed Action would not generate impacts from PCBs. There is no PCB-containing equipment in the vicinity of the roadway construction project area. As there would be no construction at the DMR former transformer site location, there would be no risk of exposure from possible hazardous materials or waste contained in the surface soils, as discovered during previous site assessments. As a preventive measure, the Army should avoid driving in the vicinity of the former transformer site on DMR during maneuvers in order to avoid potential exposure. If these areas are avoided, there would be no potential impacts, and no mitigation would be required.

Pesticides/Herbicides. Activities associated with the Proposed Action would not affect pesticide/herbicide management on DMR, as the Proposed Action would not increase the amount of pesticides/herbicides used on the installation, so there would be no impact, and no mitigation would be required.

Reduced Land Acquisition Alternative

The impacts associated with Reduced Land Acquisition would be identical to those described for the Proposed Action.

No Action Alternative

Existing conditions would continue under No Action. Under the status quo of No Action, impacts would continue at their current levels with no increase in hazardous material use or waste generation. There would be two areas of less than significant impacts under No Action, EMF and wildfires.

Electromagnetic Fields (EMFs). EMF sources would not be introduced to the installation or areas outside the installation under No Action. Signs would continue to be posted around the perimeter of all potentially harmful EMF sources to warn people about the EMF source. DOD Instruction 6055.11 and Army Pamphlet 385-64, as well as other Army regulations pertaining to EMF, would continue to be followed. Only trained personnel would work with Army equipment emitting EMF. The public would continue to have access to Dillingham Airfield and would not be allowed near Army equipment emitting harmful EMF. There would continue to be a less than significant impact to the public from exposure to EMF.

Wildfires.

As there would be no change in training at DMR under No Action, the installation would continue to support nonlive-fire maneuvers. There is a high risk of fire during the summer in the relatively dry Mokulēʻia region (USARHAW and 25th ID[L] 2001a, 134). Cigarettes, vehicles, and bivouac activities are the major sources of fire risk from military training. Continued use of Army land for training under No Action would prolong the threat of wildfires. Future Army activities would continue to be guided by the 25th ID(L) and USARHAW Wildfire Management Program, which includes the WFMP and its FMAs and wildland fire SOPs, all of which are designed to prevent and manage wildfires. Army personnel would continue to practice best management practices during operations. There would continue to be less than significant impacts involving wildfires and the continued potential for wildfires.